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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,300	04/19/2004	Ji-hun Koo	Q80724	9833
23373	7590	11/17/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			BUI, BRYAN	
			ART UNIT	PAPER NUMBER
			2863	

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/826,300

Applicant(s)

KOO ET AL.

Examiner

Bryan Bui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-13 and 17-20 is/are allowed.
- 6) ☒ Claim(s) 1, 14 and 15 is/are rejected.
- 7) ☒ Claim(s) 2-5 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's papers file don 10/7/2005 have been received and entered. Claims 1-20 are pending in the application.
2. Applicant's remark has been considered.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Case, Jr. et al (US Patent No. 5,825,350). Hereinafter Case.

With respect to claims 1 and 14, Case discloses the features of the claims invention in the apparatus and method of estimating and compensating for a bias in the sensor signal comprising: a low pass filter operable to filter the sensor signal and output a low frequency sensor signal (figure 18, LPF 1802); an operation determination unit (comparator 1808 in figure 18) operable to determine whether the sensor is not in operation; a bias estimating unit (figure 18, items 1806, 1808, 1810) operable to

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estimate bias included in the low frequency sensor signal output from LPF according to the output of the determination unit; a subtractor (figure 18, item 1804) to subtract the estimated bias from the low frequency sensor signal according to the output of the operation determination unit.

With respect to claim 15, Case further teaches differentiating the low frequency sensor (figure 18, item 1806); and determining that the sensor is not operating when an amplitude of the differentiated, low frequency sensor signal is a first value or less, and an amplitude of the low frequency sensor signal is a second value or less (figure 18, corresponding in the operation of items 1802, 1806, 1808, 1810)

6. Claims 1 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's prior art submitted in figure 1, and the background of the invention. hereinafter prior art.

With respect to claims 1 and 14, the prior art discloses the features of the claims invention in the apparatus and method of estimating and compensating for a bias in the sensor signal comprising: a low pass filter operable to filter the sensor signal and output a low frequency sensor signal (figure 1, LPF 10); an operation determination unit (comparator 12 in figure 1) operable to determine whether the sensor is not in operation; a bias estimating unit (figure 1, items 11, 12, 13) operable to estimate bias included in the low frequency sensor signal output from LPF according to the output of the determination unit; a subtractor (figure 1, item 14) to subtract the estimated bias from the low frequency sensor signal according to the output of the operation determination unit.

With respect to claim 15, Prior art teaches differentiating the low frequency sensor (figure 1, item 11); and determining that the sensor is not operating when an amplitude of the differentiated, low frequency sensor signal is a first value or less, and an amplitude of the low frequency sensor signal is a second value or less (figure 1, corresponding in the operation of items 10, 11, 12, 13).

Allowable Subject Matter

7. Claims 2-5 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. Claims 6-13, 17-20 are indicated allowable over the prior art of record.

Response to Arguments

9. Applicant's arguments filed 10/7/2005 have been fully considered but they are not persuasive.

Applicant is reminded that during patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification." Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

While the meaning of claims of issued patents are interpreted in light of the specification, prosecution history, prior art and other claims, this is not the mode of claim interpretation to be applied during examination. During examination, the claims must be interpreted as broadly as their terms reasonable allowed. This means that the words of the claim must be given their plain meaning. In re Zletz, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989). Further, the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In this instant applicant argues that the prior art of record does not teach determining whether a sensor is not in operation.

Examiner respectfully disagree, the prior art clearly discloses whether or not the bias compensation is required for low frequency sensor signal currently being output from LPF (figure 18, operation of the bias control from window comparator of low frequency (from frequency cutoff) and differentiated). Since the determination whether the sensor is in operation or not is proportional to the output signal from the sensor and when the x count indicate movement of less than the minimum threshold amount, if so, the value of x-count (out put filtered signal from sensor) to zero. The status operation of the sensor can be considered as broad as reasonable allowed such mentioned above to motion or motionless of the pointing device sensor operated by user (figure 18, column 14, lines 6+).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan Bui whose telephone number is 571-272-2271. The examiner can normally be reached on M-Th from 7am-4pm, and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571-272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BB

11/14/2005

BRYAN BUI
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Bryan Bui', is written below the printed name and title.